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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,074	02/19/2004	Michael J. McCormack	60001.0301US01/MS305781.1	4534

7590 08/18/2006

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EXAMINER

LU, KUEN S

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/782,074	MCCORMACK ET AL.	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/19/2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Action is responsive to Applicant's Application filed February 19, 2004. Claims 1-33 are pending.

Drawings

2. The drawings, filed February 19, 2004, are considered in compliance with 37 CFR 1.81 and accepted.

Claim Objections

- 3.1. Claim 2 is objected to because of the following informalities:

The use of a trademark SharePoint has been noted in this claim. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks. Appropriate correction is required.

- 3.2. Applicant is advised that should claim 29 be found allowable, claims 1, 6 and 32 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4.1. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maleport et al. (U.S. Patent Application 2004/0039743, hereafter "Maleport") in view of Davidson (Louis Davidson: Professional SQL Server 2000 Database Design, Wrox Press Ltd.®, 2001).

As per claim 1, Maleport teaches "A method of bi-directional communication between a spreadsheet application and a database" (See Fig. 4, elements 16 and 66, and Page 3, [0025] where spreadsheet application communicates with database bi-directional).

Maleport does not explicitly teach "connecting a spreadsheet to a data source", although Maleport suggests the teaching by a bi-directional communication between database and a spreadsheet (See Fig. 4, elements 16 and 66, and Page 3, [0025] where spreadsheet application communicates with database bi-directional).

However, Davidson explicitly teaches "connecting a spreadsheet to a data source" (See Page 38, lines 1-7 where application utilizing SQL Server database include building gateway connections to spreadsheet).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Davidson with Maleport reference by explicitly specifying a specific database because both references teaches spreadsheet and relational database application wherein Maleport reference is directed to message analysis on multi-platforms of databases, including spreadsheet and relational databases. However, spreadsheet is not a relational database, and the combined teaching of Davidson with Maleport reference would have allowed Maleport's system to achieve the objects of efficient accessing standard database; efficient development of a platform message implementation and efficient evaluation of interoperability between multiple platforms, by specifically utilizing SQL Server and Excel Spreadsheet as an example of implementation.

The combined teaching of the Davidson and Maleport references further teaches the following:

"publishing data from the spreadsheet to the data source" (See Maleport: Fig. 4, elements 16 and 66-70, and Page 3, [0025]-[0026] where a set of validated parameters are stored into a platform implementation database); and

"storing the data at the data source including writing any changes made to the data in the spreadsheet over corresponding data previously stored at the data source" (See Maleport: Page 2, [0021], last ten lines where words and fields associated with each selected message retrieved from database are further refined in the message implementation report before importing back to database).

As per claim 29, Maleport teaches "A method of bi-directional communication between a spreadsheet application and a database" (See Fig. 4, elements 16 and 66, and Page 3, [0025] where spreadsheet application communicates with database bi-directional).

Maleport does not explicitly teach "connecting a spreadsheet to a data source", although Maleport suggests the teaching by a bi-directional communication between database and a spreadsheet (See Fig. 4, elements 16 and 66, and Page 3, [0025] where spreadsheet application communicates with database bi-directional).

However, Davidson explicitly teach "connecting a spreadsheet to a data source" (See Page 38, lines 1-7 where application utilizing SQL Server database include building gateway connections to spreadsheet).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Davidson with Maleport reference by explicitly specifying a specific database because both references teaches spreadsheet and relational database application wherein Maleport reference is directed to message analysis on multi-platforms of databases, including spreadsheet and relational databases. However, spreadsheet is not a relational database, and the combined teaching of Davidson with Maleport reference would have allowed Maleport's system to achieve the objects of efficient accessing standard database; efficient development of a platform message implementation and efficient evaluation of interoperability between multiple platforms, by specifically utilizing SQL Server and Excel Spreadsheet as an example of implementation.

The combined teaching of the Davidson and Maleport references further teaches the following:

“importing data to the spreadsheet from the data source” (See Maleport: Fig. 4, elements 16 and 66-70, and Page 3, [0025]-[0026] where message standard database is queried by the spreadsheet application);

“modifying the imported data in the spreadsheet” (See Maleport: Page 2, [0021], last ten lines where words and fields associated with each selected message retrieved from database are further refined in the message implementation report before importing back to database); and

“publishing the modified imported data back to the data source and writing the modified imported data over the data in the data source from which the data was imported to the spreadsheet” (See Maleport: Page 2, [0021], last ten lines where words and fields associated with each selected message retrieved from database are further refined in the message implementation report before importing back to database).

As per claim 32, Maleport teaches “A method of bi-directional communication between a spreadsheet application and a database” (See Fig. 4, elements 16 and 66, and Page 3, [0025] where spreadsheet application communicates with database bi-directional).

Maleport does not explicitly teach “connecting a spreadsheet to a data source”, although Maleport suggests the teaching by a bi-directional communication between

database and a spreadsheet (See Fig. 4, elements 16 and 66, and Page 3, [0025] where spreadsheet application communicates with database bi-directional).

However, Davidson explicitly teach "connecting a spreadsheet to a data source" (See Page 38, lines 1-7 where application utilizing SQL Server database include building gateway connections to spreadsheet).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teaching of Davidson with Maleport reference by explicitly specifying a specific database because both references teaches spreadsheet and relational database application wherein Maleport reference is directed to message analysis on multi-platforms of databases, including spreadsheet and relational databases. However, spreadsheet is not a relational database, and the combined teaching of Davidson with Maleport reference would have allowed Maleport's system to achieve the objects of efficient accessing standard database; efficient development of a platform message implementation and efficient evaluation of interoperability between multiple platforms, by specifically utilizing SQL Server and Excel Spreadsheet as an example of implementation.

The combined teaching of the Davidson and Maleport references further teaches the following:

"connecting a spreadsheet to a data source via a bi-directional communication protocol allowing data to flow between the spreadsheet and the data source" (See Davidson: Page 38, lines 1-7 where application utilizing SQL Server database include building gateway connections to spreadsheet, Pages 237 and 557 where SQL Server

application communicating relational database and Excel Spreadsheet and protocols ISDN, DSL and Cable are utilized to connect user and database server);

"importing data to the spreadsheet from the data source" (See); "modifying the imported data in the spreadsheet" (See);

"exporting the modified imported data back to the data source and writing the modified imported data over the data in the data source from which the data was imported to the spreadsheet" (See Maleport: Page 2, [0021], last ten lines where words and fields associated with each selected message retrieved from database are further refined in the message implementation report before importing back to database); and

"determining whether writing the modified imported data to the data source creates a conflict with data previously written to the data source by comparing the modified imported data with data previously written to the data source" (See Page 3, [0025]-[0026] where valid implementation values are stored within the digital message standard database and check performed and deemed successful are then data element ID and implementation specification values stored and populated to platform implementation database).

As per claim 2, the combined teaching of the Davidson and Maleport references further teaches "The method of Claim 1, whereby the data source is a SharePoint data source" (See Davidson: Page 569 where Excel is utilized a spreadsheet type of data source).

As per claim 3, the combined teaching of the Davidson and Maleport references further teaches "connecting a spreadsheet to a data source includes connecting the spreadsheet to the data source via a bi-directional communication protocol" (See Davidson: Pages 38 and 237 where server connection links spreadsheet and server, including ISDN, DSL and Cable protocols).

As per claim 4, the combined teaching of the Davidson and Maleport references further teaches "the bi-directional communication protocol includes an OLE-DB communication protocol" (See Davidson: Page 242 where data is transferred and transformed between OLE DB data sources).

As per claim 5, the combined teaching of the Davidson and Maleport references further teaches "connecting the spreadsheet to the data source via a bi-directional communication protocol includes connecting the spreadsheet to the data source via a data provider application" (See Davidson: Page 242 where Data Transformation Service facility is available for transforming data between OLE DB data sources).

As per claim 6, the combined teaching of the Davidson and Maleport references further teaches the following:

"prior to publishing the data from the spreadsheet application to the data source, importing the data to the spreadsheet from the data source" (See Maleport: Fig. 4,

elements 16 and 66-70, and Page 3, [0025]-[0026] where message standard database is queried by the spreadsheet application);

"modifying the imported data in the spreadsheet" (See Maleport: Page 2, [0021], last ten lines where words and fields associated with each selected message retrieved from database are further refined in the message implementation report before importing back to database); and

"whereby publishing the data to the data source includes publishing the modified imported data back to the data source and writing the modified imported data over the data in the data source from which the data was imported to the spreadsheet" (See Maleport: Page 2, [0021], last ten lines where words and fields associated with each selected message retrieved from database are further refined in the message implementation report before importing back to database).

As per claim 7, the combined teaching of the Davidson and Maleport references further teaches "prior to publishing the data from the spreadsheet to the data source, passing the data to the data provider application" (See Davidson: Page 242 where the Data Transformation Service facility for transforming data between OLE DB data sources suggests data transformation occurs after data is retrieved from the first data source and before transferring into the second).

As per claim 8, the combined teaching of the Davidson and Maleport references further teaches "the data provider application, storing the data in a memory cache" (See Davidson: Page 536 where data is write-caching before actually writing to hard disk).

As per claim 9, the combined teaching of the Davidson and Maleport references further teaches "prior to storing the data at the data source, determining whether publishing the data to the data source creates an error condition" (See Maleport: Page 3, [0025]-[0026] where valid implementation values are stored within the digital message standard database and check performed and deemed successful are then data element ID and implementation specification values stored and populated to platform implementation database).

As per claim 10, the combined teaching of the Davidson and Maleport references further teaches "The method of Claim 9, whereby determining whether publishing the data to the data source creates an error condition includes querying the data source by a data provider application for determining whether publishing the data to the data source creates an error condition" (See Maleport: Page 3, [0025]-[0026] where valid implementation values stored within the digital message standard database is queried to determine ID of data element and, check performed and deemed successful are then data element ID and implementation specification values stored and populated to platform implementation database).

As per claim 11, the combined teaching of the Davidson and Maleport references further teaches "if publishing the data to the data source creates an error condition, returning an error message to the spreadsheet" (returning error message to application is inherent to a database management system, for example, Davidson teaches SQL Server returns error of data constraint checks to user application at Page 363, lines 15-16 next to the Paragraph of "Server: Msg 547 ...").

As per claim 12, the combined teaching of the Davidson and Maleport references further teaches "returning an error message to the spreadsheet includes identifying a data publication error associated with the error condition" (See Davidson: Page 363, lines 10-14 in the Paragraph of "Server: Msg 547" where database update error is returned).

As per claim 13, the combined teaching of the Davidson and Maleport references further teaches "the data publication error is a user permission error" (granting permission of database objects and roles and returning violation message is inherent to database management system, for example, Davidson teaches grant, revoke and deny permission to roles at Page 490).

As per claim 14, the combined teaching of the Davidson and Maleport references further teaches "The method of Claim 12, whereby the data publication error is a data source not available error" (user getting disconnected from or being unable to connect

to data base server and receiving proper error message is inherent to a database operation, for example, Davidson teaches user getting connected in the middle of a transaction at Page 422, lines 7-12).

As per claim 15, the combined teaching of the Davidson and Maleport references further teaches "the data publication error identifies that a data source schema does not support publication of the data" (verifying database table owner and granting right to access data is inherent to a database management system, for example, Davidson teaches issuing error message to an improper data access at Page 263).

As per claim 16, the combined teaching of the Davidson and Maleport references further teaches "the data publication error identifies that the data source does not support one or more data types associated with the published data" (storing matched data type to a data store table is inherent to a database management system, for example, Davidson teaches a new data type data can not be stored into certain types of database data storage at Page 278, lines 1-7).

As per claim 17, the combined teaching of the Davidson and Maleport references further teaches "prior to storing the data at the data source, determining whether publishing the data to the data source creates a conflict with data previously published to the data source" (See Maleport: Page 3, [0026] where the set of validated parameters is stored to database).

As per claim 18, the combined teaching of the Davidson and Maleport references further teaches "determining whether publishing the data to the data source creates a conflict with data previously published to the data source includes comparing the data with data previously published to the data source" (See Davidson: Page 363, lines 15-16 next to the Paragraph of "Server: Msg 547 ..." where error message of data constraint checks is returned to user application, it is also database management system inherited feature that data constraint check is implemented to prevent data replication in data source).

As per claim 19, the combined teaching of the Davidson and Maleport references further teaches "comparing the data with data previously published to the data source includes comparing the data by a data provider application" (See Maleport: Page 3, [0025] where spreadsheet application retrieves data from database for comparison with local data, and at Page 2, [0021] where data is retrieved from, modified locally and published to database).

As per claim 20, the combined teaching of the Davidson and Maleport references further teaches "if publishing the data to the data source creates a conflict with data previously published to the data source, passing an identification of any of the data that creates a conflict with data previously published to the data source to the spreadsheet for alerting a user of the spreadsheet as to the data conflict" (See Davidson: Page 363,

lines 15-16 next to the Paragraph of "Server: Msg 547 ..." where error message of data constraint checks is returned to user application, it is also database management system inherited feature that data constraint check is implemented to prevent data replication in data source).

As per claim 21, the combined teaching of the Davidson and Maleport references further teaches "if publishing the data to the data source creates a conflict with data previously published to the data source, resolving the conflict by accepting a latest data published to the data source" (remediating data error is inherent in data application, including exporting data to a data source and correcting erroneous data if a data constraint error is return, for example, Davidson teaches spotting and correcting data at Page 10, lines 1-4).

As per claim 22, the combined teaching of the Davidson and Maleport references further teaches "if publishing the data to the data source creates a conflict with data previously published to the data source, resolving the conflict by discarding any of the data that conflicts with corresponding data of the data previously published to the data source" (committing only the correct data to a database is inherent to a database management system).

As per claim 23, the combined teaching of the Davidson and Maleport references further teaches "The method of Claim 17, whereby if publishing the data to the data

source creates a conflict with data previously published to the data source, resolving the conflict by merging the data with the data previously published to the data source such that for any portion of the data that conflicts with a corresponding portion of the data previously published to the data source, writing over the corresponding portion of the data previously published to the data source with any portion of the data that conflicts with the corresponding portion of the data" (See Davidson: Page 251, lines 1-5 where changes of data are merged and published back to the database, and Maleport: Pages 2-3, [0021] and [0025]-[0026] where data is imported, refined, validated and published back to the data source).

As per claim 24, the combined teaching of the Davidson and Maleport references further teaches "breaking a communication link between the spreadsheet and the data source" (See Davidson: Page 422, lines 7-12 where user getting connected in the middle of a transaction); and "persisting any data modified in the spreadsheet after breaking the communication link" (See Maleport: Page 3, [0025]-[0026] where all ranges of checks are performed and deemed successful are then data element ID and implementation specification values stored locally in the spreadsheet); "establishing a second communication link between the spreadsheet and the data source" (See Davidson: Page 240, lines 1-15 where user connects and disconnects application from database many times and connection pooling is available as an alternative);

"publishing to the data source the data modified in the spreadsheet after breaking the communication link to the data source" (See Davidson: Page 240, lines 1-15 where connection pooling allows communication be re-established and Maleport: Page 2, [0021], last ten lines where refined content is published to database); and

"modifying data previously published to the data source with the data modified in the spreadsheet after breaking the communication link to the data source" (See Davidson: Page 240, lines 1-15 where connection pooling allows communication be suspended and re-established, and Maleport: Page 2, [0021], last ten lines where content is retrieved from database, refined in the application and published to database).

As per claim 25, the combined teaching of the Davidson and Maleport references further teaches "The method of Claim 1, whereby publishing the data to the data source includes creating a new data row in the data source" (See Fig. 4, elements 62, 60, 60, 66, 68 and 16, and Page 3, [0025]-[0026] where new message is populated to the spreadsheet application, validated as a single entry and finally published to database).

As per claim 26, the combined teaching of the Davidson and Maleport references further teaches "The method of Claim 1, whereby publishing the data to the data source includes deleting a data row from the data source" (See Maleport: Page 242, lines 8-17 where spreadsheet application communicates with other databases and, Davidson: Page 83, Paragraph: Other Operators where insert, delete and update are database operations).

As per claim 27, the combined teaching of the Davidson and Maleport references further teaches "publishing the data to the data source includes creating a new data column in the data source" (See Maleport: Page 242, lines 8-17 where spreadsheet application communicates with other databases and, Davidson: Page 83, Paragraph: Other Operators where insert, delete and update are database operations).

As per claim 28, the combined teaching of the Davidson and Maleport references further teaches "publishing the data to the data source includes deleting a data column from the data source" (See Maleport: Page 242, lines 8-17 where spreadsheet application communicates with other databases and, Davidson: Page 83, Paragraph: Other Operators where insert, delete and update are database operations).

As per claim 30, the combined teaching of the Davidson and Maleport references further teaches "connecting a spreadsheet to a data source includes connecting the spreadsheet to the data source via a bi-directional communication protocol through a data provider application" (See Davidson: Page 242 where Data Transformation Service facility is available for transforming data between OLE DB data sources).

As per claim 31, the combined teaching of the Davidson and Maleport references further teaches the following:

"prior to publishing the modified imported data back to the data source, querying the data source by the data provider application for determining whether publishing the data to the data source creates an error condition" (See Maleport: Fig. 4, elements 16 and 66-70, and Page 3, [0025]-[0026] where message standard database is queried by the spreadsheet application, and Davidson: Page 285, lines 1-8 where a database operation causes an error and returns an error message); and

"if publishing the data to the data source creates an error condition, returning an error message to the spreadsheet" (See returning error message to application is inherent to a database management system, for example, Davidson teaches SQL Server returns error of data constraint checks to user application at Page 363, lines 15-16 next to the Paragraph of "Server: Msg 547 ...").

As per claim 33, the combined teaching of the Davidson and Maleport references further teaches "notifying a user of the spreadsheet of a conflict via a data conflict message passed to the spreadsheet via the bi-directional communication protocol" (See returning error message to application is inherent to a database management system, for example, Davidson teaches SQL Server returns error of data constraint checks to user application at Page 363, lines 15-16 next to the Paragraph of "Server: Msg 547 ..."); and

"resolving the conflict by writing the modified imported data to the data source or by discarding the modified imported data so as to persist the data previously written to the data source" (See remedying data error is inherent in data application, including

exporting data to a data source and correcting erroneous data if a data constraint error is return, for example, Davidson teaches spotting and correcting data at Page 10, lines 1-4).

Conclusion

5. The prior art made of record

A. U.S. Patent Application 2004/0039743

U. Louis Davidson: Professional SQL Server 2000 Database Design, Wrox Press Ltd.®, 2001

5.1 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

B. U.S. Patent Application 2004/0138815

C. U.S. Patent Application 2004/0103365

D. U.S. Patent 6,567,822

E. U.S. Patent 5,319,777

F. U.S. Patent 5,966,716

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-

Art Unit: 2167

273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Kuen S. Lu



Patent Examiner, Art Unit 2167

August 15, 2006